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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,999

03/19/2004

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EXAMINER

LEE, SIN J

ART UNIT

PAPER NUMBER

1752

MAIL DATE

DELIVERY MODE

08/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	Application No. 10/803,999	Applicant(s) TAKAHASHI ET AL.	
	Examiner Sin J. Lee	Art Unit 1752	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 14 August 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 2-15, 18-22 and 29-31.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
Please see attachment.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

*Sin J. Lee*

Sin J. Lee  
Primary Examiner  
Art Unit: 1752

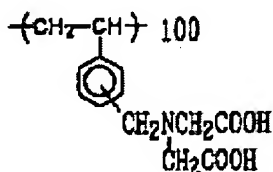
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*Claim Rejections - 35 USC § 103*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 2-15, 18-22 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al (JP 11-038635 and its full English translation provided by PTO) in view of Kawauchi (EP 0 992 850 A2).

Tan teaches a positive type photosensitive lithographic printing plate, which is made by forming a middle layer containing polymer compound having specified repeating units (1), (2), or (3) on an aluminum substrate (which has undergone hydrophilicizing treatment) and then forming a positive type photosensitive layer (which contains alkaline soluble polymer such as polyhydroxy styrene, o-quinone diazido compound, printout agent, dyes and others) on the middle layer (see abstract, claim 1, [0040], [0041], [0052] of English translation). As one of examples for the repeating units (1), (2) or (3), Tan lists the following (see [0021])

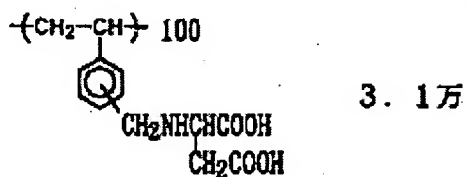
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, and this repeat unit is exemplified in Tan's working example 3 as well (see Table 1 in [0092]).

Tan teaches ([0019]) that the repeat unit (1), (2) or (3) is present in his polymer in the amount of more than 40 mol% preferably. Tan also teaches ([0023]) that his polymer has Mw of 2,000-600,000 preferably. Tan also teaches the amount of coating for his middle layer to be 5-50 mg/m<sup>2</sup> preferably (see [0026]). Tan also discloses the following repeating unit as well



as one of examples for the repeating units (1), (2) or (3) (see [0021]). Tan teaches that his polymer containing the repeating units of formula (1), (2) or (3) can be a homopolymer as well as a *copolymer* (see [0012]). Also, in [0021], Tan teaches that *methyl methacrylate or methyl acrylate* can be used as comonomers. Based on Tan's such teachings, it would have been obvious to one skilled in the art to make Tan's polymer to be a copolymer containing methyl (meth)acrylate comonomer unit with a reasonable expectation of obtaining a positive photosensitive lithographic printing plate having satisfactory printing resistance. Tan teaches that his photosensitive layer can be imaged with infrared rays and he also teaches the use of semiconductor laser (see [0065] of English translation).

Therefore, Tan teaches inventions of present claims except for the (i) present limitation with respect to the polymer further containing an onium group and (ii) present infrared absorbing agent.

With respect to the limitation (i), Kawauchi teaches a positive working planographic printing plate precursor comprising an intermediate layer and a positive working photosensitive layer, wherein the intermediate layer contains a polymer comprising a monomer unit having an acid group and a monomer unit having an onium group (see abstract, [0015], [0065]). By using such an intermediate layer, Kawauchi teaches that one can obtain an improved adhesion between the photosensitive layer and the substrate as well as remarkable improvement in the durability in printing (see [0015]). Kawauchi teaches that as the acid group, -COOH is particularly preferable

(see [0020]). Since Tan's middle layer polymer already contains a repeating unit having –COOH groups (and since Tan teaches that his middle layer polymer can be a copolymer), it would have been obvious to one skilled in the art to further include a repeat unit containing an onium group in Tan's middle layer polymer in order to obtain a good adhesion between the photosensitive layer and the aluminum substrate and to obtain remarkable improvement in the durability in printing as taught by Kawauchi. Kawauchi also teaches ([0032]) that the intermediate layer polymer can comprises two or more kinds of monomer units having an acid group and two or more kinds of monomer units having an onium group. Therefore, it would also have been obvious to one skilled in the art to further include another repeat unit containing –COOH group in Tan's middle layer polymer with a reasonable expectation of obtaining a printing plate having improved adhesion between the photosensitive layer and the substrate and improved durability in printing as taught by Kawauchi.

With respect to present limitation (ii) as to the infrared absorbing agent, as already explained above, Tan clearly teaches that his photosensitive layer can be imaged with infrared rays and he teaches the use of semiconductor laser (see [0065] of English translation). It is very well known in the art, as evidenced by Kawauchi, (see [0081]) to use a compound, which generates heat by absorbing light in an infrared region, when using infrared rays as the light source in the exposure step. *Specifically*, Kawauchi teaches cyanine dyes shown in [0102]-[0103] as having satisfactory compatibility with an alkali-soluble polymeric compound in the photosensitive layer. Since Tan teaches the use of infrared rays (such as semiconductor laser) and since Tan's photosensitive layer contains an alkali-soluble polymeric compound, it would have been obvious to one skilled in the art to use cyanine dyes shown in Kawauchi as the

compound generating heat by absorbing infrared light in order to obtain good compatibility with the alkali-soluble polymeric compound. Therefore, Tan in view of Kawauchi would render obvious present inventions of claims Therefore, Tan in view of Kawauchi would render obvious present inventions of claims 2-15, 18-22 and 29-31.

***Response to Arguments***

3. Applicants argue that neither Tan nor Kawauchi discloses or suggests a polymer having the combination of the structure of formula (I), (I-1) or (Ib), and an onium group, which provides unexpectedly superior effects. However, it is the Examiner's position that she already established above that it would have been obvious to one skilled in the art to further include a repeat unit containing an onium group in Tan's polymer in order to obtain a good adhesion between the photosensitive layer and the aluminum substrate and to obtain remarkable improvement in the durability in printing as taught by Kawauchi. Therefore, in the absence of showing unexpected superior results of present combination compared to the closest prior art, the present combination of the structure of formula (I), (I-1) or (Ib), and an onium group is still rendered obvious (also, the Examiner would like to point out that Kawauchi already teaches that by using an intermediate layer containing a polymer comprising a monomer unit having an acid group and a monomer unit having an onium group, one can obtain an improved adhesion between the photosensitive layer and the substrate as well as remarkable improvement in the durability in printing). Applicants also argue that Tan and Kawauchi merely describe that the (meth)acrylate can be used as copolymerization components in the polymers and that there is no suggestion in those references regarding the relationship with the further improved effects that are realized due to the inclusion of structure derived from a (meth)acrylate in the polymer.

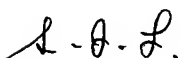
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However, the comparison between present Example 9 (that uses P-6, which does not contain a (meth)acrylate unit) and present Example 10 (that uses P-21, which contains a (meth)acrylate unit) does not show any unexpectedly superior results of present Example 10 (i.e., the differences in results between those two examples are very minor). Since Tan clearly teaches that his polymer can contain a (meth)acrylate comonomer unit, it is still the Examiner's position that present polymers of claims 2, 4 and 5 are rendered obvious in the absence of showing unexpectedly superior results of present invention.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee  
August 23, 2007



**SIN LEE**  
PRIMARY EXAMINER